

*be seen*. This is a character not shown by *P. exarata*. The interior as a whole is somewhat iridescent.

Alt. 21, length 38, breadth 29 mill. Another specimen measures, alt. 18, length 41, breadth 31½ mill.

Specimens were procured by Mr. Frederick Stearns of Detroit, Michigan, on the coast of Japan, Kii Province.

It is possibly the form referred to by Dunker as *P. exarata*. From that species it may be distinguished by many characters, such as coloration, that species having black ribs on a whitish ground, and a milky-white interior, whilst *Stearnsii* has blackish rays, covering several ribs and their interstices, and a chestnut-brown area inside the muscle-attachment. The peculiar sculpture of the inside is also of itself diagnostic. Dunker (Index Moll. Maris Japonici, p. 157) also mentions *Patella mazatlanica* Gray in connection with his "*exarata*." This shell is really a native of Chili, not Mazatlan! Dr. Ruschenberger collected specimens at Concepcion, which correspond *exactly* with Gray's figures (Beechey's Voy., Zool., pl. 39, fig. 12.) It is a more straightly conical form than *P. exarata*, differently colored outside, and having a small chestnut-brown area inside the muscle-impression; this area being much smaller than in *P. Stearnsii*, which also differs from it in the sculpture of the interior described above. Gray called his species "*mazatlanica*."

Figures of *P. Stearnsii* will be given in Mr. Stearns' catalogue of the shells collected by him during his travels in Japan, now in press.

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#### MOLLUSCA OF THE UNITED STATES.

BY JOHN H. CAMPBELL, PHILADELPHIA.

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The project of establishing a great National Collection of United States Mollusca, through the co-operation of members of the American Association of Conchologists, has been received with such favor, that it is but a question of time when the collection will be one of the finest special exhibits in the world. The Philadelphia Academy of Natural Sciences, (through its Conchological Conservator) has offered facilities for the permanent exhibition and preservation of the collection, and already a goodly number of fine shells has been received and mounted.

With the preparation and mounting of the specimens, comes the question of correctly naming them; and herein is presented the most

perplexing confusion of nomenclature. Hundreds of synonyms encumber the literature on the subject, disputes as to specific and varietal rank and even whether or not some inoffending little shell belongs to this or that genus or family, confuse the student and almost compel him to throw up his studies in despair.

The very thought of these disputes almost deferred the writer from making a beginning, but as faint heart never won fair lady, we have plunged into the work, and with the help of our colleagues throughout America will do our best to successfully carry it on. And out of this determination has grown another idea, viz.: the settlement of the nomenclature of American shells, by means of the publication, from time to time, as the shells are received, of carefully compiled catalogues of the different species arranged into genera and families and the elimination of the hundreds of useless synonyms now to be met with in "shell literature."

As everything must have a beginning, we have concluded to start the work with this number of the NAUTILUS, and taking the first family that is already represented in the Collection by all the United States species,—the Haliotidæ—give a catalogue of the species, synonymy etc., connected with it.

As a sample of the method of procedure, we will state that out of diffidence concerning our own knowledge, we have consulted such specialists as Dr. J. G. Cooper, G. W. Lichtenhaler, H. A. Pilsbry, Mrs. M. Burton Williamson, Professor Josiah Keep, R. E. C. Stearns and Henry Hemphill and after comparing the information gathered from them, have passed judgment, and committed our own views to the kind consideration of the readers of the NAUTILUS, inviting their friendly criticism, and promising them that we are sufficiently humble in spirit to cheerfully correct any errors in our lists which may be pointed out to us.

With this long preamble we present the Haliotidae, and from time to time as the collection grows and it contains the material to make comparisons, we will continue to print other lists of the same character.

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#### FAMILY HALIOTIDÆ.

The latest monograph of the family is contained in Pilsbry's continuation of Tryon's Manual of Conchology, Vol. XII, p. 72, etc. The family contains but one genus—Haliotis.

## Genus HALIOTIS Linnæus.

1. CRACHERODII Leach. Fallarones Ids. to San Diego, Cal.; Cape St. Lucas, Lower Cal.; fossil in Quaternary, San Pedro, Cal.

—Zool. Misc. 131, 1815.

*Haliotis glabra* Deshayes; *Haliotis glabra* Schubert & Wagner; *Haliotis Californiensis* Swainson; *Haliotis Cracherodii* Leach, var. *Californiensis* Swainson; *Haliotis interrupta* Valenciennes.

2. ASSIMILIS Dall. Monterey and San Diego, Cal., deep water only.—Proc. U. S. Nat. Mus., 1876, i, 46; Smithsonian Miscellaneous Col., vol. 19.

*Haliotis* (? var.) *assimilis* Dall.

3. CORRUGATA Gray. San Diego and Catalina Ids., Cal.

Wood's Index Test., Suppl., 1828.

*Haliotis nodosa* Philippi.

4. FULGENS Philippi. Monterey Bay, Cal. to La Paz and Cape St. Lucas, Lower Cal. Zeitschr. f. Mal., 1845, p. 150.

*Haliotis splendens* Reeve; *Haliotis planilirata* Reeve.

5. GIGANTEA Chemnitz. Monterey, Cal. to Kamtschatka; Japan. Conchylien Cab. X, p. 115, pl. 167, f. 1610, 1611; Gmelin, Syst. Nat. p. 3691.

*Haliotis Kamtschatkana* Jonas; *Haliotis gigantea* Chemnitz, var. *Kamtschatkana* (Jonas) Pilsbry.

6. RUFESCENS Swainson. Mendocino Co., to San Nicholas Id. Cal.; San Diego, Cal.; beach to 10 fathoms; fossil in Quaternary, San Pedro, and San Nicholas Id., Cal.

Catalogue Bligh Collection. Appendix p. 2, 1822.

? *Haliotis ponderosa*, C. B. Adams; *Haliotis Californiana*, Valenciennes.

*List of Synonyms.*

Californiana Val.—*rufescens* Swn.

Californiensis Swn.—*Cracherodii* Leach.

Discus Reeve—not found in the U. S.

Glabra Desh.—*Cracherodii* Leach.

Glabra Schub. & Wagner=*Cracherodii* Leach.

Kamtschatkana Jonas=*gigantea* Chemn.

Interrupta Val.—juv. *Cracherodii* Leach.

Nodosa Phil.—*corrugata* Gray.

Planilirata Reeve=juv. *fulgens* Phil.

Ponderosa C. B. Ad.—? *rufescens* Swn.

Pourtalesii Dall=not found in U. S.

Splendens Reeve=fulgens Phil.

*Notes.*

1. *H. Pourtalesii* Dall. Bull. Mus. Comp. Zool. xviii, 395, is said to have been dredged [one specimen] in 200 fathoms, near Florida Reefs, by Pourtales, in 1869, but as the specimen was destroyed in the great Chicago fire, and none has been found since, we may dismiss it from the list of United States species, especially as no other specimen or species of *Haliotis* is known to have been found on the East Coast of America.

2. It seems to us a pity that *H. fulgens* Phil. should be substituted for the well known and generally used name of *H. splendens* Reeve. The law of priority of description should give way in exceptional cases of merit, but as Mr. Pilsbry in Tryon's Manual has made the substitution, and some of the specialists to whom we have written agree with him, it is perhaps as well to accede to the change, so as to have the name of the shell settled.

3. A fine series of shells in the Academy collection, seems to prove that *Haliotis Kamschatkana* Jonas passes imperceptibly into *Haliotis gigantea* Chemn. The home of the species is Japan, and it reaches its highest development there, extending northward around the Coast of Asia to the West Coast of America and reaching as far south as Monterey, Cal. getting smaller in proportion to its distance from Japan. We see no reason for making it a variety.

4. Mr. Henry Hemphill of San Diego, Cal. says of *Haliotis assimilis* Dall: "It has a certain aspect of its own. Its habits are different from any of the other forms, being a deep-water and not a littoral shell, while all the other *Haliotis* are found between tides. I have always considered it a hybrid between *H. corrugata* and *H. splendens*, on account of its having an intermediate aspect about it.

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[CONTRIBUTED.]

AMERICAN ASSOCIATION OF CONCHOLOGISTS.

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DECEMBER 31, 1890.

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Since last announcement the following new members have been enrolled:

124. T. H. Aldrich, Blocton, Ala. *Tertiary fossils of Atlantic Coast.*

125. Dr. Wm. H. DeCamp, Grand Rapids, Mich. *Michigan Mollusca.*

126. Wm. H. Weeks, Jr., Brooklyn, N. Y. *Bulimus* (genus).

127. Dr. Fred. Stein, Indianapolis, Ind.

128. Francisco E. Blanes, Key West, Fla.

129. Capt. W. J. Farrer, Orange, Va. *Land and F. W. Shells of Virginia.*

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Mr. James H. Morrison has removed from Lexington, Va. to Luray Inn, Va.

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We occasionally receive letters from members inquiring about exchanging shells. There is no obligation on the part of the members